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- 1 1. (currently amended) A method of determining the flow of a data object in a software
2 architecture using queues to organize the transfer of data from one processing object to
3 another, the method comprising executing operations in at least one data processing device,
4 the operations comprising :
5 storing a queue indicator in a path object corresponding to a respective data object;
6 receiving and processing the data object in a first of said processing objects;
7 identifying a queue corresponding to a second of said processing objects the
8 identifying depending on the indicator in the path object corresponding to said data object;
9 placing said data object in the queue identified in said step of identifying.

2. (currently amended) A method as in claim 1, wherein said ~~step of identifying~~ includes
determining a result of said ~~step of processing~~.

3. (currently amended) A method as in claim 1, wherein: said ~~step of identifying~~ includes
determining a result of said ~~step of processing~~; and said queue corresponding to said
result.

4-5. (cancelled or withdrawn)

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1 6. (currently amended) At least one data processing device, executing software, the
2 software causing the device to perform operations, the operations comprising
3 • maintaining a plurality of objects, the objects comprising
4 o at least one data object;
5 o at least 3 processing objects
6 o a path object corresponding to each of said data objects; and
7 • maintaining a pipeline software architecture in which data objects are transferred from a
8 first processing object to a selected one of second and third processing objects by
9 queuing the data objects in a queue of said selected one, ~~comprising:~~
10 ~~a path object corresponding to each of said data objects;~~
11 • —at least one of said path objects containing an indicator of at least one of said second
12 and third processing object;
13 • —said first processing object defining a process a result of which is to insure that a
14 first data object processed by said first processing object is placed in a queue of said at
15 least one of said second and third processing objects responsively to one of said path
16 objects corresponding to said first data object.

1 7. (currently amended) ~~An architecture~~ A device as in claim 6, wherein said process
2 includes the generation of an indication of a result of processing of said first processing

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3 object and said first data object processed by said first processing object is placed in said
4 queue of said at least one of said second and third processing objects responsively to the
5 processing object indicator in the at least one of said path objects corresponding to said first
6 data object and responsively to said result indication.

8-9. (canceled)

10. (previously presented) The method of claim 1, wherein the path object includes a table of queue indicators.

1 11. (currently amended) A method of determining the flow of a data object in a software
2 architecture using queues to organize the transfer of data from one processing object to
3 another, the method comprising executing operations in at least one data processing device,
4 the operations comprising:
5 storing a queue indicator in a path object corresponding to a respective data object;
6 receiving and processing the data object in a first of said processing objects;
7 identifying a queue corresponding to a second of said processing objects the
8 identifying depending on the indicator in the path object corresponding to said data object;
9 placing said data object in the queue identified in said step of identifying

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10 wherein
11 the processing comprises determining a normal or faulty outcome state of the data
12 object; and
13 the identifying is dependent on said normal or faulty outcome state.

1 12. (currently amended) A method comprising executing operations in at least one data
2 processing device, the operations comprising:

3 defining objects, each comprising both data and functions that access the data, the
4 objects including: data objects, and path objects and processing objects;

5 first queuing a data object in a queue of a first processing object in response to ~~a~~ an
6 indication of the first processing object in a path object associated with the data object;

7 responsive to the first queuing, processing the data object with the first processing
8 object;

9 second queuing the data object in a queue of a second processing object in response
10 to both: results of the processing; and an indication of the second processing object in the
11 path object associated with the data object;

12 responsive to the second queuing, processing the data object with a second
13 processing object.

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1 13. (currently amended) Apparatus comprising:

2 objects, each object comprising both data and functions that access the data, the
3 objects including: data objects and path objects and processing objects, each path object
4 mutually corresponding to a respective data object;

5 a respective processing queue for each processing object, the processing objects each
6 process each data object previously queued in the respective queue, the processing of the
7 data object including using the functions of the data object to access the data of the data
8 object, the path objects each comprising indicators of next processing objects for
9 subsequent processing of the corresponding data object after the processing of the data
10 object by the current processing object, the current processing object communicating with
11 the path object to determine the next processing objects for subsequent processing of the
12 data object, after the processing of the data object by the current processing unit is
13 complete the processing object queues the data object in a queue of one of the next
14 processing objects depending on a result of the processing of the data object by the current
15 processing object.

1 14. (previously presented) A medium, readable by a data processing device and embodying
2 data for realizing at least one realized object for use in an object-oriented programming
3 environment, the environment comprising processing objects and at least one data object,

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4 the at least one data object needing to be processed along a path via processing objects that
5 are relevant to the data object, at least three of the processing objects being relevant, the at
6 least one realized object comprising:

7 a path object corresponding to the data object, the path object comprising at least
8 three queue indicators, each queue indicator indicating a respective one of the relevant
9 processing objects, so that the queue indicators define the path.

15. (previously presented) The medium of claim 14, wherein the queue indicators comprise a plurality of result dependent indicators for at least one of the relevant processing objects, the result dependent indicators including a normal path indicator and a fault path indicator, so that the one relevant processing object — responsive to its own processing result — can chose a subsequent processing object for the data object from a group of processing objects designated by the result dependent indicators in the path object for that data object.

16. (previously presented) The medium of claim 15, wherein the subsequent processing object is indicated by the fault path indicator.

17. (previously presented) The medium of claim 14, wherein the path object comprises an array of queue indicators.

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18. (previously presented) The medium of claim 14, wherein the environment comprises a plurality of data objects and at the least one realized object comprises a respective path object for each data object.